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ROYAL ASTRONOMICAL SOCIETY.

Vol. XV. *January* 12, 1855. No. 3.

Dr. Lee, V.P., in the Chair.

John Saunders Muir, Esq., 15 Harrington Square;
R. Hartley Kennedy, Esq., Kennington Lodge;
George Hamilton, Esq., Egremont, Cheshire; and
William Tomlinson, Esq., Grove Lodge, York,

were balloted for and duly elected Fellows of the Society.

Dr. Brünnow, Ann Arbor, Michigan;
Lieut. M. F. Maury, U.S.N., Director of the National Observatory, Washington; and
Dr. Benj. Althorpe Gould, Cambridge, Massachussets,

were balloted for and duly elected Associates of the Society.

Professor Hansen has announced in a letter to the Astronomer Royal that his Lunar Tables are steadily advancing towards completion. The Lords of the Admiralty have assigned to him an additional grant of 100*l.* towards defraying the expense of their construction.

The *Astronomical Journal*, edited by Dr. B. A. Gould, may be obtained of Messrs. Trübner and Co., 12 Paternoster Row, who have been appointed agents for the sale of that publication in England. It is published at irregular intervals in numbers twenty-four of which form a volume. The price of each volume is 25*s.*

Extract of a Letter from Thomas Maclear, Esq. on the Observations of Schweizer's Comet (Comet II. 1853).

"I hasten to submit to the Royal Astronomical Society with the least practicable delay the accompanying REVISAL copy of the observations made here on Schweizer's Comet.

"On receiving last Tuesday the Society's Notice, No. 8, vol. xiv., which contains Professor Challis's determination of the mean places of the stars compared with the comet, I referred to Notice No. 1 of the same volume to collate the approximate places

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sent from hence, when the accidental sight of an expression detected an oversight in the reduction of a considerable portion of the comet comparisons,—viz. the measures on the parallel for differences in right ascension by means of the micrometer screw (marked by the letter *d* in column 8) were inadvertently multiplied instead of divided by *sine north polar distance;* and the signs of those of May 20, 21, and June 4, should be changed.

" The present paper represents the observations corrected for the effect of refraction; and I rather hope than expect that it may be received in time to prevent any use being made of the former communication for the elements of the orbit. Moreover, I shall exceedingly regret if the oversight above mentioned should impair the confidence these observations deserve.

THOMAS MACLEAR.

" P.S. Referring to the original register of the observations for the approximate place of star No. 21, where there is a diagram of the field of the telescope, there must have been an error in copying, for the difference in R.A. is there entered + 4^s, and in polar distance — 11′ 17″.

" On referring this week to the heavens, I find by micrometric measurement, corrected for refraction, + 4^s·455 and — 11′ 23″·18. Applying these numbers to the mean place of star 20 given by Professor Challis, the R.A. of star 21 is 7^h 11^m 19^s·33, N.P.D. 103° 26′ 24″·55."

Revised Copy of the Observations made on Schweizer's Comet at the Cape of Good Hope. By Thomas Maclear, Esq.

The observations are corrected for refraction only.

The letters *t* and *d* in column 8 denote respectively the right ascension differences obtained by transits, or by the subtense of the spider lines as given by the micrometer scale.

1853.	Cape Mean Time.	Difference in R.A.	No. of Obs. in R.A.	Difference in N.P.D.	No. of Obs. in N.P.D.	No. of Star.	
	h m s	m s		′ ″			
May 1	7 46 28·10	...	...	+2 50·24	2	1	
	7 56 37·29	−1 46·532	2	...	...	1	t
	8 6 17·36	...	...	+3 38·17	2	1	
	8 26 37·32	...	...	+4 25·86	5	1	
	8 37 17·28	−0 34·479	1	...	...	1	t
3	7 19 49·87	...	...	+5 12·82	3	2	
	7 42 23·62	−1 12·658	4	...	...	2	t
	7 42 23·62	−1 34·739	4	...	...	3	t
	7 42 23·62	−1 53·530	4	...	...	4	t
	7 56 28·52	...	...	+5 25·34	3	2	
	8 10 29·46	−0 50·447	3	...	...	2	

Clouded on the 2d.

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1853.		Cape Mean Time.	Difference in R.A.	No. of Obs. in R.A.	Difference in N.P.D.	No. of Obs. in N.P.D.	No. of Star.	
		h m s	m s		′ ″			
May	3	9 11 36·35	−0 1·623	8	...	...	2	*t*
		9 18 32·71	...	...	+ 5 41·45	1	2	
	4	6 35 11·59	...	...	− 4 56·02	2	5	
		6 57 18·62	+0 34·348	9	...	...	5	*t*
		6 57 18·62	−0 17·970	9	...	...	6	*t*
		7 14 42·60	...	...	− 3 19·55	2	6	
		7 22 54·73	−0 3·370	9	...	...	6	*t*
		7 35 59·60	...	...	− 3 20·31	2	6	
		8 8 11·72	+0 25·340	5	...	...	6	*t*
		8 30 21·54	...	...	− 3 19·85	3	6	
		8 44 49·83	+0 44·486	3	...	...	6	*t*
		8 10 53·45	−1 22·002	3	...	...	7	*t*
		8 30 21·54	...	...	− 1 4·42	3	7	
		8 50 28·63	−0 58·841	6	...	...	7	*t*
		9 13 5·16	...	...	− 1 7·67	2	7	
	5	7 0 27·44	...	...	+11 28·42	1	8	
		7 37 17·49	−7 29·912	1	...	...	8	*t*
	7	7 3 43·40	+1 14·379	4	...	...	9	*t*
		7 19 37·18	...	...	−10 13·21	2	9	
		7 36 1·49	+1 22·408	3	...	...	9	*t*
		8 3 37·29	...	...	−10 23·67	3	9	
		9 3 57·54	...	...	−10 31·27	2	9	
		9 11 16·84	+1 47·781	1	...	...	9	*t*
		7 3 43·40	−0 46·079	4	...	...	10	*t*
		7 25 34·21	...	...	− 7 36·70	2	10	
		7 36 1·49	−0 37·838	3	...	...	10	*t*
		8 35 1·80	...	...	− 7 52·92	2	10	
		9 11 16·84	−0 12·661	1	...	...	10	*t*
	8	6 23 36·26	−0 34·350	4	...	...	11	*t*
		6 44 36·46	...	...	− 1 28·88	2	11	
		6 23 36·26	−1 1·502	4	...	...	12	*t*
		6 50 2·67	...	...	+ 3 59·82	2	12	
		6 23 36·26	−2 20·278	4	...	...	13	*t*
		7 0 22·20	...	...	+10 54·81	3	13	
	9	7 2 3·47	+2 31·153	2	...	...	13	*t*
		7 30 53·78	+2 36·305	1	...	...	13	*t*
		7 43 20·78	...	...	+ 6 47·17	3	13	
		8 2 31·62	+2 42·029	5	...	...	13	*t*
		8 19 33·00	...	...	+ 6 39·63	2	13	

May 5. Owing to clouds these observations only could be obtained.
7. Angle of position of comet's tail, 118° 40′. No. 10 is in the comet's tail.
9. Angle of position of comet's tail, 121° 30′. Nucleus remarkably bright.

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1853.	Cape Mean Time.	Difference in R.A.	No. of Obs in R.A.	Difference in N.P.D.	No. of Obs. in N.P.D.	No. of Star.	
	h m s	m s		′ ″			
May 10	7 11 44·27	...	...	−3 6·40	2	14	
	7 30 39·76	−0 27·602	1	...	...	14	*t*
11	6 36 25·27	+0 44·368	3	...	...	15	*t*
	7 0 34·48	...	...	+5 37·06	4	15	
	7 21 27·38	+0 50·129	4	...	...	15	*t*
	8 12 59·09	...	...	+5 20·65	4	15	
	8 32 5·06	+0 58·440	4	...	...	15	*t*
	6 36 25·27	−1 37·933	3	...	...	16	*t*
	7 0 34·48	...	...	+1 2·07	4	16	
	7 21 27·38	−1 32·201	4	...	...	16	*t*
	8 12 59·09	...	...	+0 45·13	4	16	
	8 32 5·06	−1 23·953	4	...	...	16	*t*
12	6 41 44·35	...	...	+1 20·44	6	17	
	6 54 57·74	−0 1·515	8	...	...	17	*d*
	7 2 55·05	−0 0·727	9	...	...	17	*d*
	7 15 7·60	...	...	+1 14·82	9	17	
	7 36 9·97	+0 2·656	14	...	...	17	*d*
	8 10 38·13	...	...	+1 5·85	5	17	
	8 19 36·27	+0 7·158	5	...	...	17	*d*
14	7 27 56·82	...	...	−5 52·53	3	17	
	8 4 32·88	+4 28·769	5	...	...	17	*t*
	8 42 50·40	...	...	−6 6·18	5	17	
15	6 32 58·31	...	...	+3 34·95	5	18	
	6 49 34·79	−0 37·701	5	...	...	18	*t*
	7 7 42·58	−0 36·625	5	...	...	18	*d*
	7 24 52·76	...	...	+3 27·48	5	18	
	7 40 2·46	−0 34·625	5	...	...	18	*d*
	7 49 22·93	...	...	+3 22·72	5	18	
	8 0 34·68	−0 33·223	5	...	...	18	*d*
	8 11 40·64	...	..	+3 20·33	5	18	
16	6 20 43·76	...	...	+7 42·41	5	19	
	6 32 35·81	−0 27·532	5	...	...	19	*d*
	6 40 49·26	...	...	+7 38·85	5	19	
	6 53 34·76	−0 26·166	5	...	...	19	*d*
	7 3 28·35	...	...	+7 37·75	5	19	
	7 14 24·55	−0 24·868	5	...	...	19	*d*
	7 21 15·63	...	...	+7 33·79	5	19	

May 10. Clouded after these observations.
11. Angle of position of comet's tail, 115° 40′. Nucleus less bright; halo round the head more diffused.
12. Angle of position of comet's tail, 117° 30′
14. ,, ,, 118 0 Clouds.
15. ,, ,, 117 35

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1853.	Cape Mean Time.	Difference in R.A.	No. of Obs. in R.A.	Difference in N.P.D.	No. of Obs. in N.P.D.	No. of Star.	
	h m s	m s		′ ″			
May 16	7 37 17·40	−0 23·256	5	...	...	19	*d*
	7 49 10·05	...	...	+7 28·26	5	19	
	7 57 44·84	−0 22·118	5	...	...	19	*d*
	8 21 20·18	...	...	+7 23·12	5	19	
17	6 15 6·14	−0 17·635	5	...	...	20	*d*
	6 16 0·00	−0 22·284	5	...	...	21	*d*
	6 58 51·77	...	...	−7 56·53	5	20	
	7 5 4·55	...	...	+3 26·32	5	21	
	7 16 43·34	−0 14·416	5	...	...	20	*d*
	7 18 12·00	−0 19·047	5	...	...	21	*d*
	7 28 54·65	...	...	−8 0·01	5	20	
	7 34 51·87	...	...	+3 26·49	5	21	
	7 47 36·38	−0 12·801	5	...	...	20	*d*
	7 48 38·21	−0 17·328	5	...	...	21	*d*
	8 4 19·63	...	...	−8 0·36	5	20	
	8 9 58·11	...	...	+3 17·34	5	21	
20	6 42 20·46	−0 13·130	5	...	...	22	*d*
	6 49 23·50	...	...	−0 48·62	5	22	
	6 55 1·77	−0 12·631	5	...	...	22	*d*
	7 2 55·48	...	...	−0 51·64	5	22	
	7 8 59·68	−0 11·939	5	...	...	22	*d*
	7 15 43·57	...	...	−0 50·25	5	22	
	7 21 17·66	−0 11·499	5	...	...	22	*d*
21	6 41 26·83	...	...	+6 3·15	5	23	
	6 49 47·26	+0 15·169	5	...	...	23	*d*
	6 55 44·28	...	...	+6 3·05	5	23	
	7 2 29·57	+0 15·464	5	...	...	23	*d*
	7 9 28·82	...	...	+6 1·23	5	23	
23	6 35 26·93	...	...	+7 51·42	5	24	
	6 48 36·57	−0 2·862	5	...	...	24	*d*
	7 0 21·44	−0 2·726	5	...	...	24	*d*
	7 9 41·51	−0 2·275	5	...	...	24	*d*
	7 18 44·82	...	...	+7 41·29	5	24	
28	6 27 55·21	...	...	+4 55·45	5	25	
	6 45 59·48	−0 31·904	5	...	...	25	*d*
	6 56 48·34	−0 31·935	5	...	...	25	*d*
	7 6 1·61	...	...	+4 51·99	5	25	
29	6 13 20·56	−0 6·919	5	...	...	25	*d*

May 17. Angle of position of comet's tail 118° 45′.

20. The comet is faint, partly owing to the moonlight. The tail barely distinguishable.

23. Thin clouds. The comet is very indistinct.

29. The comet is very faint.

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1853.	Cape Mean Time.	Difference in R.A.	No. of Obs. in R.A.	Difference in N.P.D.	No. of Obs. in N.P.D.	No. of Star.	
	h m s	m s		′ ″			
May 29	6 20 29·69	...	...	+2 32·25	5	25	
	6 29 17·02	−0 6·573	5	...	...	25	*d*
	6 35 10·81	...	...	+2 30·35	5	25	
	6 40 52·64	−0 6·273	5	...	...	25	*d*
31	6 24 32·60	+0 38·938	5	...	...	25	*d*
	6 31 0·12	...	...	−2 5·16	5	25	
	6 37 46·37	+0 38·917	5	...	...	25	*d*
	6 46 57·97	...	...	−2 9·65	5	25	
	6 54 6·78	+0 38·865	5	...	...	25	*d*
June 1	6 27 12·98	...	...	+10 1·96	5	26	
	6 34 57·26	−0 50·387	5	...	...	26	*d*
	6 41 52·68	...	...	+9 58·95	5	26	
	6 50 17·87	−0 49·796	5	...	...	26	*d*
	7 14 34·44	−0 48·083	3	...	...	26	*t*
	7 14 34·44	+1 0·237	3	...	...	25	*t*
	7 24 49·65	...	...	−4 23·62	5	25	
2	6 27 25·54	+1 18·965	3	...	...	25	*t*
	6 45 16·64	...	...	−6 26·94	4	25	
	7 1 22·02	+1 19·253	2	...	...	25	*t*
	6 27 25·54	−1 24·261	3	...	...	27	*t*
	6 45 16·64	...	...	−2 53·07	4	27	
	7 1 22·02	−1 23·896	2	...	...	27	*t*
3	6 36 53·39	...	...	+5 54·40	5	26	
	6 45 8·39	−0 11·989	5	...	...	26	*d*
	6 52 20·58	...	...	+5 53·80	5	26	
4	7 7 22·67	...	...	+3 53·75	1	26	
	7 13 12·69	+0 5·810	2	...	...	26	*d*
	7 25 19·64	...	...	+3 47·42	2	26	
5	6 34 48·27	...	...	+2 4·91	3	26	
	6 45 21·34	+0 22·608	5	...	...	26	*d*
	6 55 12·79	...	...	+2 4·20	3	26	
7	6 35 58·61	...	...	−1 22·38	3	26	
	6 47 3·93	+0 54·498	10	...	...	26	*d*
	6 58 43·86	...	...	−1 24·30	5	26	
	7 16 36·13	+0 54·550	10	...	...	26	*t*
	7 31 40·34	...	...	−1 26·34	2	26	
8	6 49 9·52	+1 8·199	5	...	...	26	*t*
	7 7 54·37	...	...	−2 59·49	10	26	
	7 26 44·26	+1 9·505	3	...	...	26	*t*

June 1. The measurements diminish in precision owing to the faintness of the comet.
3. The comet is very faint.
4. Generally clouded. These observations only could be obtained.

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1853.	Cape Mean Time.	Difference in R.A.	No. of Obs. in R.A.	Difference in N.P.D.	No. of Obs. in N.P.D.	No. of Star.	
	h m s	m s		′ ″			
June 9	6 23 37·43	...	...	−4 22·13	5	26	
	6 38 11·42	+1 23·619	7	...	...	26	*t*
	6 56 13·48	...	...	−4 23·55	5	26	
10	6 23 48·76	...	...	−5 47·12	5	26	
	6 39 39·45	+1 38·681	5	...	...	26	*t*
	6 54 45·86	...	...	−5 48·28	5	26	
11	6 34 14·35	...	...	+4 51·73	5	28	
	6 45 47·37	−0 23·449	5	...	...	28	*d*
	6 55 0·64	...	...	+4 50·24	5	28	

June 10. The moonlight is now diminishing the visibility of the comet.

"*Royal Observatory, Cape of Good Hope,*
Nov. 12*th*, 1854."

On the Telescopic Appearances of Saturn with a 7½-inch Object-Glass. By the Rev. W. R. Dawes.

In the spring of last year (1854) I availed myself of an opportunity of increasing the optical means in my possession, by the purchase of a 7½-inch object-glass, having a focal length of nearly 9½ feet. It is the work of Mr. Alvan Clark, of Boston, U.S., who has long been known in that city as a most successful painter of portraits, but took to the manufacture of telescopes as an amateur. Being dissatisfied with reflectors, on which he commenced his operations, he attempted the manufacture of object-glasses; and succeeded so well, that in the autumn of 1851 he communicated to me the places of some new and very close double stars, which he had discovered with glasses whose apertures were 4¾ and 5¼ inches. In the following year he completed an object-glass of 7⅛ inches aperture for the observatory at Williams's College, which was tried at the Harvard Observatory by the Messrs. Bond, and highly approved: immediately after which he commenced one of 7½ inches aperture, intended to be retained and mounted equatoreally for his own use. At his request I sent him some extremely difficult tests, selected from Mr. Otto Struve's *Pulkova Catalogue;* several of which have a central distance of little more than half a second, and some even less. Yet of all these I soon received from the ingenious maker (who has also proved himself an acute observer) perfectly correct diagrams; together with the places of one or two extremely difficult new double stars which he had discovered with this glass. As a specimen of these, I may mention 95 *Ceti*, which is at present favourably situated for observation. Though unwilling to part with this glass, Mr. Clark consented to let me have it to try against my Munich telescope; and in March 1854 it arrived, with its tube, finder, and eye-pieces.